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Department of Energy

ROCKY FLATS OFFICE
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Mr. Martin Hestmark
U. S. Environmental Protection Agency, Region VIII
ATTN: Rocky Flats Project Manager, 8HWM-FF
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Denver, Colorado 80202-2405

Mr. Gary Baughman
Hazardous Waste Facilities Unit Leader
Colorado Department of Health
4300 Cherry Creek Drive South
Denver, Colorado 80222-1530

Gentlemen:

Enclosed please find two copies each of page A-2 from the "Identification of Operable Unit No. 3 Area of Concern Final Report" that was forwarded to you on October 12, 1993. We have learned that page A-2 was not collated into some copies of the document. If page A-2 is missing from your documents, please insert the enclosed page.

If you have any questions , please call Robert H. Birk of my staff at 966-5921.

Sincerely,

Richard J. Schassburger
Acting Director
Environmental Restoration Division

Enclosure

A-OU03-000389

cc w/Enclosure:
A. Rampertaap, EM-453
B. Brainard, OC, RFO
L. Wodell, Jeffco
M. Tucker, Jeffco
J. Stromberg, Jeffco
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T. Brunner, Broomfield
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Administrative Record File

cc w/o Enclosure:
W. Busby, EG&G
M. Guillaume, EG&G
D. Smith, EG&G
B. Lavelle, EPA
J. Schieffelin, CDH
D. Norberry, CDH

factors from EPA (1992). The risk per 0.19 pCi/g SAC of Am^{-241} in OU 3 soils under the Remedy Report Recreation Exposure model due to incidental inhalation is

$$Am^{-241}Risk_{inh} = (6.2E-8) * \left(\frac{3.2\,E-8}{3.8\,E-8}\right) * (0.19)$$

$$Am^{-241}Risk_{inh} = 9.9E-9$$

and the risk due to incidental ingestion is

$$Am^{-241}Risk_{ing} = (5.9E-8) * \left(\frac{2.4\,E-10}{2.3\,E-10}\right) * (0.19)$$

$$Am^{-241}Risk_{ing} = 1.2E-8$$

with a total Am^{-241} LECR contribution of 9.9E-9 (by inhalation) + 1.2E-8 (by ingestion) = 2.2E-8.

The Total LECR then, per 1 pCi/g SAC of Pu^{-239} and 0.19 pCi/g SAC of Am^{-241} on OU 3 soils under the Remedy Report Recreation Exposure model is [1.2 E-7 (Pu^{-239}) + 2.2E-8 (Am^{-241})] = 1.4E-7.

Therefore, to meet the 1.0E-6 LECR goal under the Remedy Report Recreation Exposure model, OU 3 soils must contain no more than 7.0 pCi/g SAC Pu^{-239} and 1.4 pCi/g Am^{-241} because 1.4E-7 may be divided into 1.0E-6 about seven times.

This same methodology has been used to incorporate Am^{-241} ingrowth and health effects into all scenarios discussed in this report. The end result of the consideration of Am^{-241} is that LECR remains at 1.0E-6 and Pu^{-239} concentrations are reduced about 15 percent to make room, so to speak, for Am^{-241} risk contribution.